IN THE CLAIMS:

The following is a complete listing of the claims in this application, reflects all changes currently being made to the claims, and replaces all earlier versions and all earlier listings of the claims:

1.-30. (Canceled)

31. (New) A method of driving a solid image pickup device comprising a photoelectric conversion unit, a charge-voltage conversion unit for converting electric charges from the photoelectric conversion unit into voltage signals, a signal amplification means for amplifying the voltage signals generated in the charge-voltage conversion unit, and a charge transfer means for transferring photoelectric charges from the photoelectric conversion unit to the charge-voltage conversion unit, said method comprising the steps of:

performing a primary readout operation of transferring a part of the photoelectric charges accumulated in the photoelectric conversion unit in a readout period from the photoelectric conversion unit to the charge-voltage conversion unit; and

performing at least one other readout operation of transferring the rest of the photoelectric charges from the photoelectric conversion unit to the charge-voltage conversion unit.

32. (New) The method of driving a solid image pickup device according to claim 31, wherein output signals read out from the primary readout operation and the at least one other readout operation after the primary readout operation are retained

respectively and added, and resulting added output signals are outputted from a horizontal scan circuit to a common output line.

33. (New) The method of driving a solid image pickup device according to claim 31, wherein after the primary readout operation and before a readout operation after the primary readout operation, at least one intermediate readout operation is performed by resetting the charge-voltage conversion unit, transferring a part of the photoelectric charges from the photoelectric conversion unit to the charge-voltage conversion unit, and reading out output signals amplified by the amplification means to a signal output line.

34. (New) A solid image pickup device comprising:

a photoelectric conversion unit;

a charge-voltage conversion unit for converting electric charges from the photoelectric conversion unit into voltage signals;

a signal amplification means for amplifying the voltage signals generated in the charge-voltage conversion unit; and

a charge transfer means for transferring photoelectric charges from the photoelectric conversion unit to the charge-voltage conversion unit,

wherein a primary readout operation of transferring a part of the photoelectric charges accumulated in the photoelectric conversion unit in a readout period from the photoelectric conversion unit to the charge-voltage conversion unit is performed, and

wherein a least one other readout operation of transferring the rest of the photoelectric charges from the photoelectric conversion unit to the charge-voltage conversion unit is performed.

35. (New) The solid image pickup device according to claim 34, wherein the photoelectric conversion unit is an embedded-type photodiode.

36. (New) An image pickup system comprising:

a solid image pickup device according to 34;

an optical system for focusing a ray of light to the solid image pickup device; and

a signal processing circuit for processing output signals from the solid image pickup device.

37. (New) An image pickup system comprising:

a solid image pickup device according to 34;

an optical system for focusing a ray of light to the solid image pickup device;

a mechanical shutter for determining an exposure time of the solid image pickup device; and

a signal processing circuit for processing output signals from the solid image pickup device.